California

Statewide Communication Interoperability Plan (SCIP)

July 2013

EXECUTIVE SUMMARY

The California Statewide Communication Interoperability Plan (CalSCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The CalSCIP is a critical mid-range (three- to five-years) strategic planning tool to help California prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

The purpose of the CalSCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.

- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.

- Achieve the State's interoperable communications vision and mission through a statewide strategy planning framework.

The following are California's Vision and Mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Vision: Achieve sustainable statewide interoperable communications.

Mission: By 2017, provide a statewide strategic planning framework for an innovative, inclusive, scalable, sustainable, and well-managed interoperability infrastructure that promotes national standards and is effective in addressing the unique urban and rural requirements of the emergency responders and designated public service organizations serving the citizens of California.

The following strategic goals represent the priorities for delivering California's vision for interoperable and emergency communications.

- Governance –
  - o Develop a coordinated relationship between the emergency communications community and the State Legislature
  - o Develop a single interoperability governance body
  - o Revisit Planning Area boundaries to better align to Mutual Aid Regional Advisory Committees (MARACs)

- Standard Operating Procedures (SOPs) –
  - o Standardize SOPs statewide and Tactical Interoperable Communications Plans (TICPs) to maintain National Incident Management System (NIMS)/Standardized Emergency Management System (SEMS) compliance regarding interoperable communications

- Technology –
  - o Leverage existing and new infrastructure to maximize efficient usage, employing shared resources among private and public entities
  - o Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, video, and data services over the next five years

- Training and Exercises –
  - o Implement a statewide training process for initial and recurring training on communications equipment, technologies, and SOPs

- Usage –
  - o Develop a program to regularly test communications equipment and infrastructure

- Outreach and Information Sharing –
  - o Maintain and enhance outreach program to leverage interoperability-related activities, including social media

- Life Cycle Funding –
  - o Identify a sustainable funding mechanism to support California Statewide Interoperability Executive Committee (CalSIEC) efforts
  - o Encourage stakeholders to develop life cycle funding plans

TABLE OF CONTENTS

1. INTRODUCTION

The California Statewide Communication Interoperability Plan (CalSCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The CalSCIP is a critical mid-range (three- to five-years) strategic planning tool to help California prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. This document contains the following planning components:

- Introduction – Provides the context necessary to understand what the CalSCIP is and how it was developed.

- Purpose – Explains the purpose/function(s) of the CalSCIP.

- State's Interoperable and Emergency Communications Overview – Provides an overview of the State's current and future emergency communications environment and defines ownership of the CalSCIP.

- Vision and Mission – Articulates the State's three- to five-year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.

- Strategic Goals and Initiatives – Outlines the strategic goals and initiatives aligned with the three- to five-year vision and mission of the CalSCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOPs), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

- Implementation – Describes the process to evaluate the success of the CalSCIP and to conduct reviews to ensure it is up-to-date and aligned with the changing internal and external environment.

- Reference Materials – Includes resources that provide additional background information on the CalSCIP or interoperable and emergency communications in California or directly support the CalSCIP.

Figure 1 provides additional information about how these components of the CalSCIP interrelate to develop a comprehensive plan for improving interoperable and emergency communications.
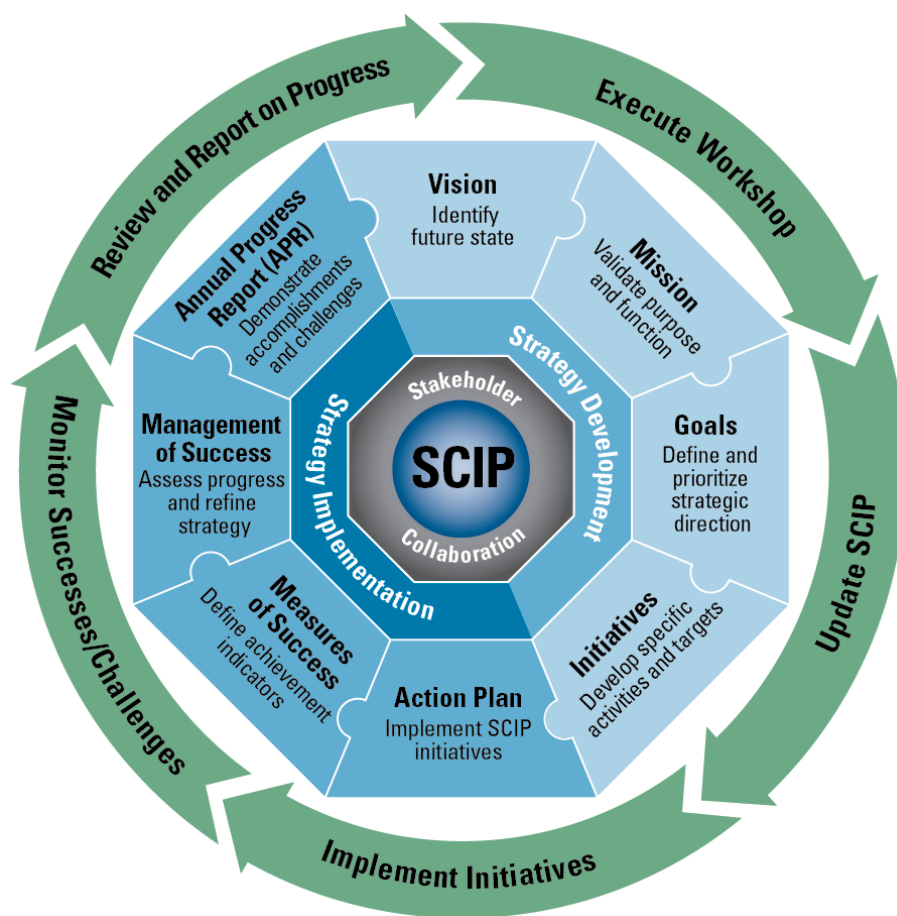
Figure 1: SCIP Strategic Plan and Implementation Components

The CalSCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. California has taken significant steps towards enhancing interoperable and emergency communications, including extensive training and exercises across the State, developing statewide SOPs, and publishing California's Interoperability Field Operations Guide (Cal IFOG).

However, more remains to be done to achieve California's vision. It is important to note that this work is part of a continuous cycle as California will always need to adapt to evolving technologies, operational tactics, and changes to key individuals (e.g., Governor, project champions). In the next three- to five-years, California will encounter challenges relating to operability, interoperability, geography, aging equipment/systems, emerging technologies, changing project champions, and sustainable funding.

Wireless voice and data technology is evolving rapidly and efforts are underway to determine how to leverage these new technologies to meet the needs of public safety. For example, the enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (the Act), specifically Title VI, related to Public Safety Communications, authorizes the deployment of the Nationwide Public Safety Broadband Network (NPSBN). The NPSBN is intended to be a wireless, interoperable nationwide communications network that will allow members of the public safety community to securely and reliably gain and

share information with their counterparts in other locations and agencies. New policies and initiatives such as the NPSBN present additional changes and considerations for future planning efforts and require an informed strategic vision to properly account for these changes. Figure 2 illustrates a public safety communications evolution by describing the long-term transition toward a desired converged future.
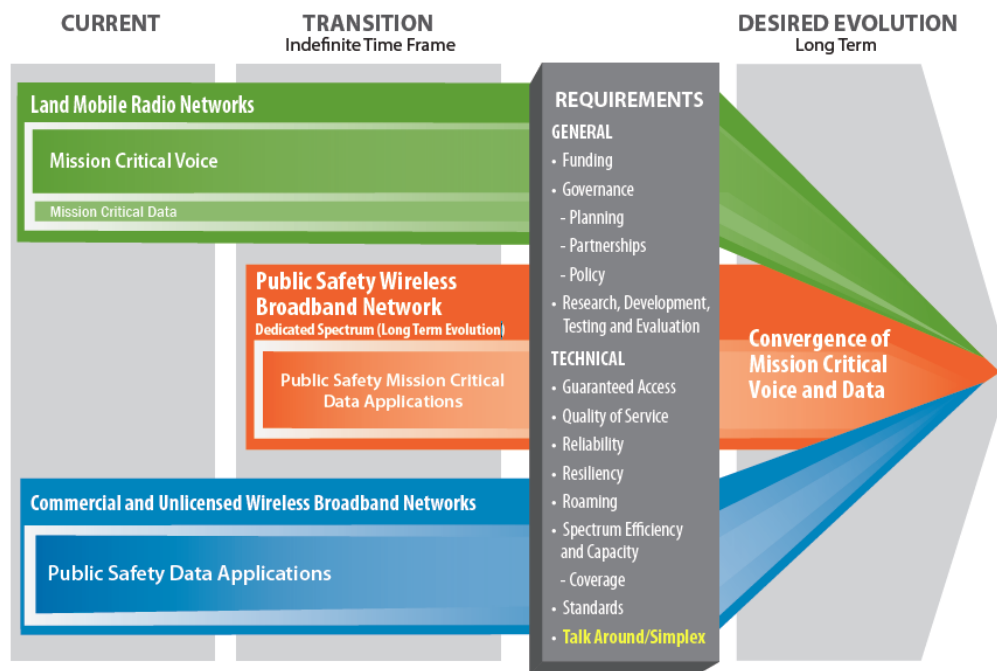

Figure 2: Public Safety Communications Evolution

Integrating capabilities such as broadband provide an unparalleled opportunity for the future of interoperable communications in California. It may result in a secure path for information-sharing initiatives, Public Safety Answering Points (PSAPs), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) voice systems in the foreseeable future due to implementation factors associated with planning, deployment, technology, and cost. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for broadband initiatives prior to any implementation.

There is no defined timeline for the deployment of the NPSBN; however, California keeps up-to-date with the planning and build-out of the NPSBN in the near and long term in coordination with the First Responder Network Authority (FirstNet). FirstNet is the independent authority within the National Telecommunications and Information Administration (NTIA) and is responsible for developing the NPSBN, which will be a single, nationwide, interoperable public safety broadband network. The network build-out will require continuing education and commitment at all levels of government and across public safety disciplines to document network requirements and identify existing resources and assets that could potentially be used in the build-out of the network. It will also be necessary to develop and maintain strategic partnerships with a variety of stakeholder agencies and organizations at the national, State, regional, local, and tribal levels and design effective policy and governance structures that address new and

emerging interoperable and emergency communications technologies. During this process, investments in LMR will continue to be necessary and in the near term, wireless data systems or commercial broadband will complement LMR. More information on the role of these two technologies in interoperable and emergency communications is available in the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Public Safety Communications Evolution brochure.[1] California is seeking the opportunity to be an early adopter of the NPSBN, and has established the Director of the Public Safety Communications Office (PSCO) as the FirstNet point-of-contact.

Additionally, achieving sustainable funding in the current fiscal climate is a priority for California. As State and Federal grant funding diminishes, States need to identify alternative funding sources to continue improving interoperable and emergency communications for voice and data systems. Key priorities for sustainable funding in California include prioritizing CalSCIP goals, communication system upgrades, and supporting the California Statewide Interoperability Executive Committee (CalSIEC). More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in OEC's System Life Cycle Planning Guide.[2]

The Interoperability Continuum, developed by SAFECOM and shown in Figure 3, serves as a framework to address all of these challenges and continue improving operable/interoperable and emergency communications. It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications.

---

[1] OEC's Public Safety Communications Evolution brochure is available here:
http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf
[2] OEC's System Life Cycle Planning Guide is available here:
http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf
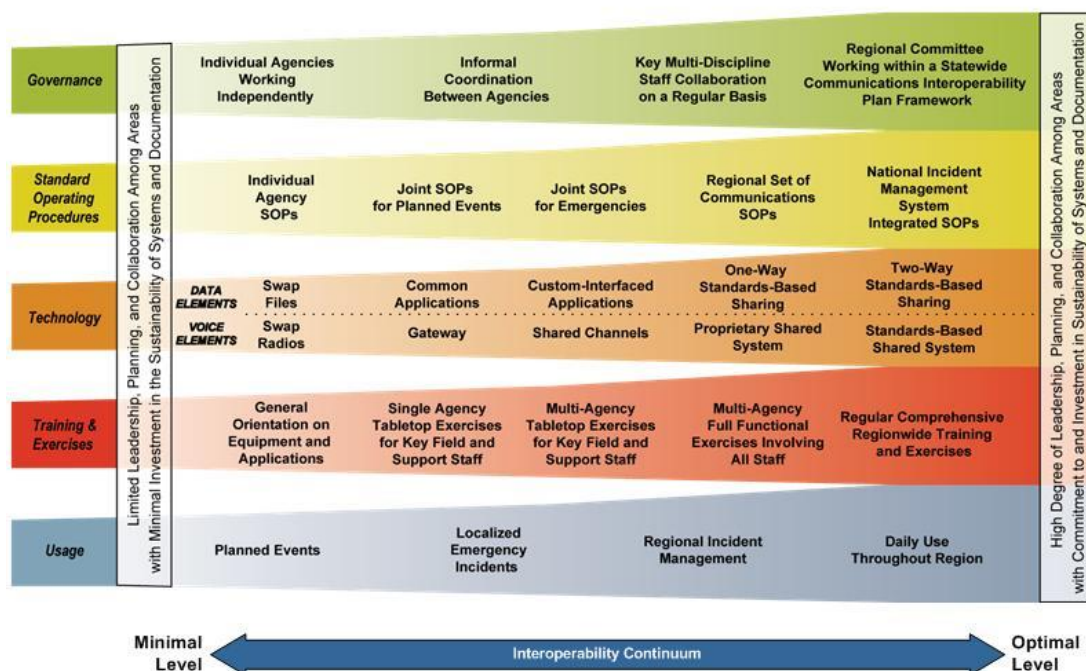
Figure 3: The Interoperability Continuum

The Continuum identifies five critical success elements that must be addressed to achieve a successful interoperable communications solution:

- Governance – Collaborative decision-making process that supports interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of California's efforts to address communications interoperability.

- SOPs – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.

- Technology – Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.

- Training and Exercises – Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.

- Usage – Familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.

More information on the Interoperability Continuum is available in OEC's Interoperability Continuum brochure.[3] The following sections will further describe how the CalSCIP will be used and the State's plans to enhance interoperable and emergency communications.

---

[3] OEC's Interoperability Continuum is available here:
http://www.safecomprogram.gov/oecguidancedocuments/continuum/Default.aspx

2. PURPOSE

The purpose of the CalSCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.

- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.

- Achieve the State's interoperable communications vision and mission through a statewide strategy planning framework.

The development and execution of the CalSCIP assists California with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive 8 (PPD-8)[4] National Preparedness Goal for Operational Communications.[5]

In addition to the CalSCIP, California will develop an Annual Progress Report (APR) that will be shared with OEC and other stakeholders to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the CalSCIP. More information on the CalSCIP APR is available in Section 6.4.

This CalSCIP is owned and managed by the Statewide Interoperability Coordinator (SWIC). The SWIC has the authority to and is responsible for making decisions regarding this plan. The SWIC is also responsible for ensuring that this plan is implemented and maintained statewide. In December 2007, the first CalSCIP was developed through the combined efforts of the CalSIEC and the Public Safety Radio Strategic Planning Committee (PSRSPC) and other key stakeholders across the State. Every two years, the CalSCIP is updated and measured to include goals and initiatives reflective of California's emergency communications environment, priorities, and challenges. In July 2013, the Governor's Office of Emergency Services (Cal OES) partnered with OEC to hold a two-day workshop focused on updating and streamlining the CalSCIP based on stakeholder input.

---

[4] PPD-8 was signed in 2011 and is comprised of six elements: a National Preparedness Goal, the National Preparedness System, National Planning Frameworks and Federal Interagency Operational Plan, an annual National Preparedness Report, and ongoing national efforts to build and sustain preparedness. PPD-8 defines a series of national preparedness elements and emphasizes the need for the whole community to work together to achieve the National Preparedness Goal. http://www.dhs.gov/presidential-policy-directive-8-national-preparedness.
[5] National Preparedness Goal – Mitigation and Response Mission Area Capabilities and Preliminary Targets – Operational Communications: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.
    1. Ensure the capacity to communicate with the emergency response community and the affected populations and establish interoperable voice and data communications between Federal, State, and local first responders.
    2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and transition to recovery.

3. STATE'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

California relies on a system-of-system approach across 12 major shared statewide or state-orientated systems and numerous regional and local systems of varying capabilities. Local agencies use frequency bands ranging from 2 megahertz (MHz) to 800 MHz, whereas the most State agencies use Very high frequency (VHF) band, ultra high frequency (UHF), and 800 MHz. The only Spectrum State and local agencies have for systems expansions falls within the 700 MHz band.

Interoperable and emergency communications-related efforts in California are strategically driven by the CalSIEC and PSRSPC, and these entities hold final authority over the CalSCIP. The two groups hold joint meetings to ensure that local, regional, statewide, and State-level perspectives are included in interoperability planning and implementation. The CalSIEC is the statewide governance body representative of all disciplines and jurisdictions, and channels local stakeholder input, guidance, and recommendations for CalSCIP maintenance and implementation. Four Planning Areas (Northern, Capital-Bay, Central, and Southern) comprise CalSIEC's regional governance structure, whose boundaries are based on geography and radio frequency coverage. Three working groups (Policy, Operations, and Technical) also provide stakeholder input and subject matter expertise for plan development and implementation.

The PSRSPC serves as the State body primarily responsible for developing and implementing a statewide integrated public safety communication system that facilitates interoperability among State public safety departments as well as other first responder agencies. The group is also responsible for coordinating other shared uses of the public safety spectrum consistent with Federal Communications Commission (FCC) decisions and regulations. The PSRSCP Technical Working Group (TWG) functions as the primary focal point for ongoing technical assignments.

Despite fiscal constraints, California has focused on addressing needs identified by stakeholders whenever possible. Recent accomplishments include providing training and exercises across the State, and establishing a process for developing and sharing statewide SOPs.

California continues to support regional systems and foster collaboration to provide State and local emergency responders with fully interoperable communications throughout the State. The system-of-systems approach will facilitate communications regardless of technologies, infrastructure or frequency bands and will allow transparency among first responders. A list of California's major radio systems can be found in Appendix A.

4. VISION AND MISSION

The Vision and Mission section describes the California vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

California Interoperable and Emergency Communications Vision:
Achieve sustainable statewide interoperable communications.

California Interoperable and Emergency Communications Mission:
By 2017, provide a statewide strategic planning framework for an innovative, inclusive, scalable, sustainable, and well-managed interoperability infrastructure that promotes national standards and is effective in addressing the unique urban and rural requirements of the emergency responders and designated public service organizations serving the citizens of California.

5. STRATEGIC GOALS AND INITIATIVES

The Strategic Goals and Initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and emergency communications. The goals and initiatives are grouped into seven sections, including Governance, SOPs, Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

5.1 Governance

The Governance section of the CalSCIP outlines the future direction of the California governance structure for interoperable and emergency communications. The State's communications interoperability efforts are guided by the CalSIEC and PSRSPC. The two committees provide significant input and represent stakeholders from multiple public safety disciplines and jurisdictions, various public service and private sector groups, and all levels of government. The CalSIEC and PSRSPC conduct joint meetings, and leverage each group's efforts to avoid duplication and ensure ongoing collaboration.

California seeks to better align its emergency communications efforts, both at the State level through developing support in the State legislature and at the local level by coordinating Planning Area boundaries with Mutual Aid Regional Advisory Committee (MARAC) jurisdictions.

Table 1 outlines California's goals and initiatives related to governance.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date (MM/YYYY)
1.	Develop a coordinated relationship between	1.1 Appoint a legislative representative	Cal OES	07/2015

Governance Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date (MM/YYYY)
	the emergency communications community and the State Legislature	1.2 Develop Annual Report to Legislature	CalSIEC and PSRSPC	10/2014, annually
		1.3 Host an annual emergency communications summit to enhance relationships and tie training together among the State's various communications groups (i.e., MARACs, frequency coordination groups, technical working groups, the Regional Emergency Communications Coordination Working Group [RECCWG])	Cal OES	05/2014
2.	Develop a single interoperability governance body	2.1 Request legislative change of California Public Safety Communications Act of 2002, Government Code 8592 to define a single governance body	Cal OES	12/2013
		2.2 Review current CalSIEC and PSRSPC membership, and revise Statewide Interoperabilty Governance Body (SIGB) participation to include appropriate organizations such as broadband-related entities	Cal OES	07/2014
3.	Revisit Planning Area boundaries to better align to MARACs	3.1 Align Planning Area and MARAC meetings	SWIC	03/2014
		3.2 Conduct an outreach program to create change in Planning Area boundaries	SWIC/CalSIEC	07/2015
		3.3 Propose change to Planning Area boundaries to align with Mutual Aid Regions to Planning Area Chairs	SWIC/CalSIEC	07/2015

5.2 Standard Operating Procedures (SOPs)

The SOPs section of the CalSCIP identifies the framework and processes for developing and managing SOPs statewide. The CalSIEC serves as the clearing house for establishing and executing the process by which statewide SOPs are developed, managed, maintained, and upgraded. Most SOPs across the State are locally based and identified in detail within their respective Operational Area (OA) Tactical Interoperable Communications Plan (TICP). Localities develop memoranda of understanding (MOUs) and SOPs with participating agencies for the use of interoperable protocols and technologies such as gateways or radio cashes. The regions communicate the SOPs through their existing governance structure and document the process and protocols in their TICPs.

California's population size and geographic diversity present challenges when establishing standards across the States. After the 1991 East Hills Fire in Oakland, the State legislature established the Standardized Emergency Management System (SEMS) to improve the coordination of State and local emergency responders, and is required by the California Emergency Services Act for managing multiagency and multijurisdictional responses. SEMS incorporates the use of the Incident Command System, California Disaster and Civil Defense Master Mutual Aid Agreement, the OA concept and interagency coordination to ensure local government entities are eligible for reimbursement of response-related costs.

Table 2 outlines California's goals and initiatives for SOPs.

Table 2: Standard Operating Procedures Goals and Initiatives

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
4.	Standardize SOPs statewide and TICPs to maintain NIMS/ SEMS-compliance regarding interoperable communications	4.1 Convene TWG to assess SOPs/TICPs across the State and adopt a template for SOPs/TICPs	CalSIEC TWG	07/2014
		4.2 Encourage SOPs as part of the requirement for funding	PSRSPC & CalSIEC	07/2015

5.3 Technology

The Technology section of the CalSCIP outlines California's plan to maintain and upgrade existing technology; the roadmap to identify, develop, and implement new and emerging technology solutions; and the approach to survey and disseminate information on current and future technology solutions to ensure user needs are met. The focus of California's plan to improve interoperability is a vision of a system of systems integrating existing public safety communications networks. The State works to coordinate technology purchases at a regional level and enhance connectivity through interconnecting existing legacy architectures with standards-based networks. Many

existing communications systems have reached or exceeded their life expectancy; local radio systems require funding, additional channels, and modernization.

Table 3 outlines California's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
5.	Leverage existing and new infrastructure to maximize efficient usage, employing shared resources among private and public entities	5.1 Develop a needs assessment of communications systems in the State in preparation for FirstNet	Cal OES	12/2014 (contingent on FirstNet requirements)
		5.2 Develop an inventory of communication systems and assets in the State	Cal OES	12/2014 (contingent on FirstNet requirements)
		5.3 Develop and maintain a database of statewide and local assets including ownership contact information	Cal OES	07/2016
6.	Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, video, and data services over the next five years	6.1 Promote the benefit of technology development and maintenance	Cal OES	07/2014
		6.2 Coordinate with California Department of Technology Telecommunications Procurement Office to avoid incompatibilities among vendor systems during purchasing process	PSRSPC & CalSIEC	12/2013

5.4 Training and Exercises

The Training and Exercises section of the CalSCIP explains California's approach to ensure that emergency responders are familiar with interoperable and emergency communications equipment and procedures and are better prepared for responding to real-world incidents. The training and exercise needs of CalSIEC's four Planning Areas vary due to geography, population density, and existing mutual aid agreements. The State coordinates closely with each Planning Area Chair for the availability of resources and prioritizes training and exercise opportunities, in addition to California's annual statewide Golden Guardian Exercise. The Northern Planning Area continues to support local Communications Unit Leaders (COMLs), Communications Unit Technicians (COMTs), and dispatcher training events.

- The Capital-Bay Planning Area has prioritized the development of a certification and qualifications program for all-hazards COMLs in conjunction with the State's training and exercise division.
- The Central Planning Area focuses on conducting continuous outreach to all levels to create awareness of emerging technologies and to integrate these tools into day-to-day operations.
- The Southern Planning Area developed several different communications interoperability training courses for its five operational areas including discipline-specific training, advanced interoperability training, and an instructor certification course. These courses were designed to be easily tailored to accommodate different systems and technology in use by different Operational Areas, and are offered to all Planning Areas.

Table 4 outlines California's goals and initiatives for training and exercises.

Table 4: Training and Exercises Goals and Initiatives

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
7.	Implement a statewide training process for initial and recurring training on communications equipment, technologies, and SOPs	7.1 Develop, distribute, and maintain a comprehensive statewide training schedule in plain language to communicate upcoming training events	SWIC/Cal OES Training Division	12/2013
		7.2 Identify dedicated funding for additional training opportunities, including advanced users, train-the-trainer, and auxiliary communications personnel	Cal OES	12/2013, annually
		7.3 Promote exercising communications capabilities	CalSIEC	12/2013, annually

5.5 Usage

The Usage section of the CalSCIP outlines efforts to ensure responders adopt and familiarize themselves with interoperable and emergency communications technologies, systems, and operating procedures in the State. Regular usage ensures the maintenance and establishment of interoperability in case of an incident. California's ultimate goal for emergency communications is to have interoperability utilized on the statewide system of systems on a daily basis to ensure users are kept abreast of current protocols, equipment operations, and techniques.

Many of the regional and local systems conduct weekly tests, though usage among counties and across systems is a challenge. Regular usage tests are important to maintain equipment and resources, as well as to keep users fully trained on available equipment in preparation for a real-world incident. To promote relationship-building among agencies, the State encourages users to take advantage of existing system tests and other established activities.

Table 5 outlines California's goals and initiatives for usage.

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
8.	Develop a program to regularly test communications equipment and infrastructure	8.1 Add systematic test schedule to the Public Interoperability Calendar, and encourage universal participation	CalSIEC/SWIC	12/2013, annually
		8.2 Provide online calendar access to Planning Area chairs to post relevant training, exercise, and testing information	SWIC	12/2013
		8.3 Promote regular testing of gateways and interoperability solutions	CalSIEC	12/2013, ongoing

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the CalSCIP outlines California's approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common emergency communications initiatives. California places a strong emphasis on promoting interoperability and coordination across the State. The CalSIEC encourages local cross-jurisdictional and cross-disciplinary participation through the Planning Areas and their engagement with the MARACs and local stakeholders.

To support stakeholder engagement, Cal OES utilizes numerous social media sites such as Facebook and Twitter. Currently, there is no protocol for what to send out to stakeholders, and how to communicate with them most effectively. The SWIC Office seeks to enhance the program by developing a more targeted approach to what stakeholders would like to know, how often, and how they would like to be informed.

Table 6 outlines California'*s* goals and initiatives for outreach and information sharing.

Table 6: Outreach and Information Sharing Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
9.	Maintain and enhance outreach program to leverage interoperability-related activities, including social media	9.1 Develop a protocol for stakeholder engagement to post information to social media outlets	SWIC	07/2014

5.7 Life Cycle Funding

The Life Cycle Funding section of the CalSCIP outlines California's plan to fund existing and future interoperable and emergency communications priorities. Funding for California's interoperability efforts are solely funded through Homeland Security grants. Strategies to identify sustainable funding continue to stall due to the State's fiscal environments, though the State leverages its current capabilities through coordination and outreach.

Though the Planning Areas and Urban Area Security Initiatives (UASIs) receive some grant assistance through State Homeland Security grants, California does not have a dedicated funding stream. This lack of long-term funding affects planning and progress in each lane of the Interoperability Continuum, and prohibits the State from planning or keeping up with the pace of emerging technology.

Table 7 outlines California's goals and initiatives for life cycle funding.

Table 7: Life Cycle Funding Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
10.	Identify a sustainable funding mechanism to support CalSIEC efforts	10.1 Distribute annual SAFECOM grant guidance to CalSIEC members	SWIC	05/2014, annually
		10.2 Distribute State fund information related to emergency communications activities	PSRSPC/CalSIEC	05/2014, ongoing
		10.3 Collaborate with other State agencies to develop a Budget Change Proposal	SWIC/California Military Department	05/2014

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		(BCP)	(CMD)	
11.	Encourage stakeholders to develop life cycle funding plans	11.1 Distribute OEC Guidance document on life cycle funding	SWIC	12/2013
		11.2 Seek creative solutions to ongoing funding challenges	CalSIEC/Local Governments	07/2014
		11.3 Address interoperability activities in State budget to enable life cycle planning	CalSIEC/PSRSPC	12/2018

6.   IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process California will use to determine a plan to execute the initiatives in the SCIP. Eleven new strategic goals and corresponding initiatives have been developed through this most recent SCIP revision process. The CalSIEC working groups will review the revised CalSCIP, and then present the document to the full CalSIEC for approval via consensus. Based on recommendations from the working groups and members, the CalSIEC will formally adopt the revised CalSCIP as a recognized planning tool to assist California prioritize resources, strengthen governance, identify future investments, address interoperability gaps, and inform local and State elected officials and stakeholders. The approved CalSCIP will be sent to PSRSPC and the Cal OES Director for support, and posted to the Cal OES website. The CalSIEC will also send the CalSCIP to the appropriate State agencies, Planning Areas, MARACs, FIRESCOPE Communications Work Group, communications-based State legislative committees, and other key stakeholder groups, The CalSIEC will use regularly scheduled meetings to follow and discuss identified strategic goals and initiatives.

6.2 Measures of Success

The Measures of Success section of the CalSCIP defines the measures that California will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Table 8 outlines these measures for California. More information on how these measures are managed is included in Section 6.3.

Table 8: SCIP Measures of Success

	Measures of Success				
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
1.	Develop a coordinated relationship between the emergency communications community and the State Legislature	No reporting mechanism to the Governor or State Legislature.	Submit an annual report on California's emergency communication environment to key legislators in the State Senate and Assembly.	11/2014	SWIC
2.	Develop a single interoperability governance body	PSRSPC is codified but its status is unclear. CalSIEC holds conference calls monthly but is not codified.	One body is codified as California's SIGB.	11/2015	Cal OES Director
3.	Revisit Planning Area boundaries to better align to MARACs	4 Planning Areas overlapping 6 MARACs with non-aligning borders. Unclear buy-in across the State whether realignment would be beneficial.	Facilitate realignment discussions in each Planning Area and MARAC.	12/2014	SWIC/CalSIEC Chair
4.	Standardize SOPs statewide and TICPs to maintain NIMS/SEMS-compliance regarding interoperable communications	TICPs follow template/no SOP standardization exists.	30% of counties utilizing standardized SOPs/TICPs within their jurisdiction.	(12 months following updated NECP release)	CalSIEC
5.	Leverage existing and new infrastructure to maximize efficient usage, employing shared resources among private and public entities	Some State agencies, metropolitan services, and counties coordinate resources or maintain private-public partnerships. No single source of information.	All appropriate State agencies and 30% of counties researching opportunities for new partnerships.	(24 months following State and Local Implementation Grant Program [SLIGP] release)	FirstNet Designated Point-of-Contact

		Measures of Success			
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
6.	Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, video, and data services over the next five years	State agency technology roadmap exists. Some individual entities have a proprietary technology roadmap.	50% of State agencies and local jurisdictions have developed their own or shared technology roadmap.	07/2015	Cal OES
7.	Implement a statewide training process for initial and recurring training on communications equipment, technologies, and SOPs	Cal OES provides ad hoc training through OEC Technical Assistance.	Annually providing at least 2 Communications Unit (COMU) training opportunities in each Planning Area.	01/2015 (pending funding approval)	SWIC
8.	Develop a program to regularly test communications equipment and infrastructure	Ad hoc and entity-specific testing only. No formal coordination.	All agencies conduct a system and equipment test at least once a year.	10/2014	CalSIEC
9.	Maintain and enhance outreach program to leverage interoperability-related activities, including social media	Leveraging social media and other outreach methods to promote interoperability statewide.	Increase users in database by 50%.	07/2014	SWIC
10.	Identify a sustainable funding mechanism to support CalSIEC efforts	No identified State funding source.	BCP submitted.	05/2014	Cal OES
11.	Encourage stakeholders to develop life cycle funding plans	No State guidance, though industry and OEC guidance exists.	50% of counties follow life cycle funding guidance.	(12 months following updated NECP release)	SWIC

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method California will follow to add, update and refine the measures of success. Each CalSIEC meeting will include updates on goals' progress from the measure owner, with special

attention to any obstacles to success. Based on these updates, the CalSIEC will be able to evaluate the effectiveness of the CalSCIP, and to refine California's interoperable communication strategy as needed. These regular periodic updates will also facilitate the completion of California's SCIP APR.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process California will use to conduct reviews of the CalSCIP to ensure it is up to date and aligned with the changing internal and external interoperable and emergency communications environment as well as to track and report progress against the defined initiatives and measures of success. A biannual CalSCIP review and update is essential to maintain California's statewide interoperable communication strategy. The CalSIEC is primarily responsible for the SCIP's maintenance and revision, as coordinated by the SWIC and Planning Area Chairs.

7. REFERENCE MATERIALS

The Reference Materials section outlines resources that contribute additional background information on the CalSCIP and interoperable and emergency communications in California. Table 9 includes the links to these reference materials.

Table 9: SCIP Reference Materials

Title	Description	Source/Location
CalSIEC Webpage	Important information and updates relating to CalSIEC and the Planning Areas	http://www.calema.ca.gov/TechnologyOperations/Pages/calsiec.aspx
PSRSPC Webpage	Important information and updates relating to PSRSPC	http://www.calema.ca.gov/TechnologyOperations/Pages/PSRSPC.aspx
CalSIEC Work Products	This site includes links to strategic plans, field operations guides, and radio system plans	http://www.calema.ca.gov/TechnologyOperations/Pages/calsiec.aspx
Interoperability Calendar	Includes dates for emergency communications related events	http://www.calema.ca.gov/TechnologyOperations/Pages/Interop-Calendar.aspx

APPENDIX A: MAJOR SYSTEMS

Table A-1: Major Systems, Updates, and New Systems

Major Systems Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
State Agency(ies) System	Mobile Interoperability Gateway Units (MIGU)	*Governor's Office of Emergency Services*	Other: Gateways for establishing interoperability among disparate public safety radio systems at the scene of major incidents. Utilizes ACU 1000/2000 for interconnections between different systems Voice and Data *6 Mobile Units strategically deployed statewide*	*N/A*	Regional	Updated System
Shared Statewide System	Operational Area Satellite Information System (OASIS)	*Governor's Office of Emergency Services*	Other: Stand-alone primary redundant digital satellite communication system that leases 22.2 megabytes of bandwidth used to exchange disaster intelligence and resource request	*OASIS Endpoint located in 58 counties and other public safety*	State	Updated System New updates applied to OASIS system in October 2013.

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			when a secure communication source is needed	*partners. In addition, located in 16 transportable units*		
			Voice and Data			
Shared Statewide System	Statewide Microwave System	*Governor's Office of Emergency Services*	Choose frequency P25 Compatible Choose make Analog Conventional Not Encrypted Other: Extensive microwave system that allows for controlled communications capabilities for public safety agencies throughout the State	*13 state agencies*	State	Updated System *Statewide Microwave is currently undergoing modernization from analog to digital components.*
			Voice			
Shared Statewide System	California Highway Patrol (CHP) System	*California Highway Patrol*	VHF (High Band): 150MHz to 170MHz VHF (High Band): 150MHz to 170MHz	*CHP Headquarters and Regional Field Offices*	State	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			VHF (Low Band): 30MHz to 50 MHz P25 Compatible Choose make Choose digital/analog Choose trunked/conventional Choose encryption level Other: Primary CHP radio system with VHF low band used for statewide communication, VHF high band (154 MHz) used to provide "extender" access to officer portable radios, and UHF band for State Police activities Voice Voice and Data			
Shared Statewide System	Hospital Emergency Administrative Radio System (HEAR)	*Governor's Office of Emergency Services*	Choose frequency Choose P25 description Choose make Choose digital/analog Choose trunked/conventional		State	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			Choose encryption level Other: Inter-system mutual assistance frequency under an area-wide medical communications plan			
			Voice			
State Agency(ies) System	California Highway Patrol Enhanced Radio System (CHPERS)	*California Highway Patrol*	Various Bands P25 Compliant Choose make Digital Choose trunked/conventional Choose encryption level Other: Land Mobile Radio (LMR) repeater system in the National Public Safety Planning Advisory Committee (NPSPAC) band used by public safety agencies that have insufficient requirements to procure their own LMR system	*CHP Headquarters and Regional Field Offices*	State	Existing System
			Voice			
Shared Statewide	California	California	VHF (High Band): 150MHz to	*58 Operational*	Regional	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
System	Emergency Services Radio System (CESRS)	Emergency Management Agency	170MHz Choose P25 description Choose make Analog Conventional Not Encrypted Other: Statewide LMR repeater system in the VHF high band used for coordination between OES staff and regional OES staff and available for use by other State and local emergency response agencies Voice	*Areas*		
Shared Statewide System	Cal Emergency Management Agency (EMA) Fire	California Emergency Management Agency	VHF (High Band): 150MHz to 170MHz Choose P25 description Choose make Choose digital/analog Choose trunked/conventional Choose encryption level Other: Statewide LMR simulcast repeater in the VHF high band used by Fire Mutual Aid		Regional	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			Coordinators at the State, regional, and operational levels			
			Voice			
State Agency(ies) System	State Communications System (STACOM)	*Governor's Office of Emergency Services*	VHF (High Band): 150MHz to 170MHz Choose P25 description Choose make Choose digital/analog Choose trunked/conventional Choose encryption level Other: Uses 10 assigned frequencies in the High Frequency band between 2 and 8 MHz and provides emergency radio communications coverage across California for non-routine operations Voice	*N/A*	State	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
State Agency(ies) System	Fire Mutual Aid Radio System (FIREMARS)	*Governor's Office of Emergency Services*	[VHF (High Band): 150MHz to 170MHz Choose P25 description Choose make Choose digital/analog Choose trunked/conventional Choose encryption level Other: Portable repeaters in the VHF high band maintained for deployment on an as-needed basis to manage the control of a single major fire Voice	*N/A*	State/Local	Existing System
State Agency(ies) System	California On-Scene Emergency Coordination (CALCORD) System	*Governor's Office of Emergency Services*	VHF (High Band): 150MHz to 170MHz Choose P25 description Choose make Choose digital/analog Choose trunked/conventional Choose encryption level Other: Single VHF high band	*N/A*	State/Local	Existing System

Major Systems Information

System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			frequency that provides common radio frequencies statewide for on-scene interagency coordination by State and local public safety and special emergency agencies Voice *No physical sites- Frequencies Only*			

APPENDIX B: LIST OF ACRONYMS

APR	Annual Progress Report
BCP	Budget Change Proposal
Cal IFOG	California Interoperability Field Operations Guide
Cal OES	The Governor's Office of Emergency Services
CalSCIP	California Statewide Communication Interoperability Plan
CalSIEC	California Statewide Interoperability Executive Committee
CMD	California Military Department
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
DHS	U.S. Department of Homeland Security
FCC	Federal Communications Commission
FirstNet	First Responder Network Authority
LMR	Land Mobile Radio
MARAC	Mutual Aid Regional Advisory Committee
MHz	Megahertz
MOU	Memorandum of Understanding
NECP	National Emergency Communications Plan
NG911	Next Generation 911
NIMS	National Incident Management System
NPSBN	Nationwide Public Safety Broadband Network
NTIA	National Telecommunications and Information Administration
OA	Operational Area
OEC	Office of Emergency Communications
PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
PSCO	Public Safety Communications Office
PSRSPC	Public Safety Radio Strategic Planning Committee
RECCWG	Regional Emergency Communications Coordination Working Group
SCIP	Statewide Communications Interoperability Plan

SEMS	Standardized Emergency Management System
SIGB	Statewide Interoperability Governing Body
SLIGP	State and Local Implementation Grant Program
SOP	Standard Operating Procedure
SWIC	Statewide Interoperability Coordinator
TICP	Tactical Interoperable Communications Plan
TWG	Technical Working Group
UASI	Urban Area Security Initiative
UHF	Ultra High Frequency
VHF	Very High Frequency